

## My Calendar – I [\(View\)](#)

You are implementing a program to use as your calendar. We can add a new event if adding the event will not cause a **double booking**.

A **double booking** happens when two events have some non-empty intersection (i.e., some moment is common to both events.).

The event can be represented as a pair of integers `start` and `end` that represents a booking on the half-open interval  $[start, end)$ , the range of real numbers  $x$  such that  $start \leq x < end$ .

Implement the `MyCalendar` class:

- `MyCalendar()` Initializes the calendar object.
- `boolean book(int start, int end)` Returns `true` if the event can be added to the calendar successfully without causing a **double booking**. Otherwise, return `false` and do not add the event to the calendar.

### Example 1:

#### Input

```
["MyCalendar", "book", "book", "book"]
```

```
[[], [10, 20], [15, 25], [20, 30]]
```

#### Output

```
[null, true, false, true]
```

#### Explanation

```
MyCalendar myCalendar = new MyCalendar();
```

```
myCalendar.book(10, 20); // return True
```

```
myCalendar.book(15, 25); // return False, It can not be booked because time 15 is already booked by another event.
```

```
myCalendar.book(20, 30); // return True, The event can be booked, as the first event takes every time less than 20, but not including 20.
```

### Constraints:

- $0 \leq start < end \leq 10^9$
- At most 1000 calls will be made to `book`.

